

$$x^6 = 50$$

$$x = \sqrt[6]{50}$$

$$x^6 = (x^3)^2$$

$$x = -\sqrt[6]{50}$$

Quel est le nombre
qui, élevé à la puissance 6,
donne 50?

$$9 \cdot x^5 = 72$$

$$x^5 = \frac{72}{9} = 8$$

$$x^5 = 8 \iff x = \sqrt[5]{8}$$

$$8x^4 - 100 = 0$$

+ 100

$$8x^4 = 100$$

$$x = \sqrt[4]{12,5}$$

÷ 8

$$x^4 = \frac{100}{8} = \frac{25}{2} = 12,5$$

$$x = \sqrt[4]{\frac{25}{2}} = \left(\frac{25}{2}\right)^{1/4} = \frac{(5^2)^{1/4}}{2^{1/4}} = \frac{5^{1/2}}{2^{1/4}}$$

$$\frac{1}{x^3} = 20$$

$$x \neq 0$$

$$\frac{x^3 \cdot 1}{1 \cdot x^3} = 20x^3 \iff \frac{\cancel{x^3}}{\cancel{x^3}} = 20x^3$$

$$20x^3 = 1$$

$$x^3 = \frac{1}{20}$$

$$\Rightarrow x = \sqrt[3]{\frac{1}{20}} = \frac{1}{\sqrt[3]{20}}$$

$$x^8 - 7x^6 = 0$$

$$x^6 \cdot x^2 - x^6 \cdot 7 = 0$$

$$x^6(x^2 - 7) = 0$$

$$x^6 = 0 \Leftrightarrow x = 0$$

$$x^2 - 7 = 0 \Leftrightarrow x^2 = 7$$

$$A \cdot B = 0$$

$$\Rightarrow A = 0$$

$$\text{ou } B = 0$$

$$x = \sqrt{7}$$

$$x = -\sqrt{7}$$

$$x^4 + 16 = 0$$

$$x^4 = -16$$

-16

negatif

positif

$$(x^2)^2 \geq 0$$

Pas de solution.